

September 27, 2016

Virginia Department of Environmental Quality
Office of Environmental Impact Review
ATTN: Ms. Bettina Sullivan
629 East Main Street – Room 631
Richmond, Virginia 23219

RE: Federal Consistency Certification for the proposed Curles Neck Sand and Gravel Mine, Henrico County, Virginia (COE # NAO-2016-1228)

Dear Ms. Sullivan:

This document provides the Commonwealth of Virginia with Curles Neck Properties, LLC. Consistency Certification and necessary data and information under Coastal Zone Management Act (CZMA) §307(c)(3)(A) and 15 CFR Part 930, subpart D, for the proposed Curles Neck Sand and Gravel Mine (Project).

Curles Neck Properties, LLC. certifies that the proposed activity complies with the enforceable policies of Virginia's Coastal Zone Management Program (VCP) and will be conducted in a manner consistent with the VCP.

Project Applicant and Contact

Curles Neck Properties, LLC.
ATTN: Jerry Cable
701 E. Byrd St.
Richmond, VA 23219

Authorization Permits Sought

The Applicant anticipates pursuing a Virginia Department of Environmental Quality (DEQ) Virginia Water Permit and an Army Corps of Engineers (COE) Section 404 Individual Permit to support the development of the Project.

Project Description

Curles Neck Properties, LLC, is proposing mining operations to extract the mineral reserves within the Curles Neck Farm (Site). This is the primary purpose of this project. Sand and gravel has been mined adjacent to this parcel, by several companies, since the early 1950's, and this is one of three areas containing reserves that have yet to be mined. The proposed Project includes the construction of a sand and gravel pit that will provide construction materials for construction activities (i.e. concrete, Portland cement, road beds, etc.). The proposed site is of sufficient size, possesses quality sand and stone deposit, and exhibits direct access to the James River and local road networks, without necessitating any further onsite marine facility or

offsite road improvements, which could be a source of related additional environmental effects contributed to creating a new mining site.

The sand and gravel reserves will be extracted using a phased approach to open pit mining. Preparing the site for mining will include removing the top-soil and vegetation to a designated overburden storage area, where it can be stored and used at a later date for reclamation purposes. Mining will begin in cell '1' at the northernmost boundary and continue in a southerly direction. The mining plan is designed to be its own sediment trap or E&S structure, where each cell will capture the stormwater run-off from the previous cell. The reclamation will also occur in a phased approach, where only a limited number of cells will be open at time, and reclamation will occur concurrently with the development of new cells. Each cell or "lift" is approximately 40-50 foot drop in elevation, where the reclamation will result in a large pond and agricultural fields located to the center and western extent of the site, and reclaiming original contours to the extent practicable in areas on the western extent of the site, where potentially eligible historic buildings are located.

Site Location

Curles Neck Farms is located just south of Richmond Virginia, in Henrico County, Virginia, and is bound on the west by the James River (see attached [Figure 1](#)). Because transportation costs are often a limiting factor, the Mine's location, adjacent to I-95 and the James River, is ideally situated to supply sand and gravel for construction activities via barge to the Tidewater Region of Virginia or in Richmond Area via trucks through the existing roadways (i.e. Route 5, I-295, etc.). It is located within the Lower James watershed (HUC 02080206) and is drained by the James River and unnamed tributaries to the James River. The property is located in the Coastal Plain Physiographic Province.

Site Description

The majority of the Site consists of agriculture fields with various farm structures and a family dwelling located within the site limits. Three ponds that are the result of previous mining activities are located in the southeast corner of the Site and offsite to the north and northwest of the project. The Site is bound by the James River to the west, Curles Neck Road to the north and east, and agricultural fields to the south.

The adjacent properties were involved in mining operations and have served the local market since the early 1950's, most recently by Vulcan Materials, which ceased extraction in 2008. The project area, comprises approximately 132 acres. The project area is surrounded by reclaimed mining areas, which consist of a combination of active agricultural fields, wildlife habitat areas, and reclaimed ponds, which are used for irrigation and other wildlife uses. Accessing the mineral reserves within the central portion of the Farm is the primary purpose of this project. In addition, the project has been designed to accommodate the secondary purpose of the project; which is to create productive farm fields and preserve the aesthetics of the historic site

Due to the central location of jurisdictional waters and wetlands within the project area, impacts could not be avoided. The applicant has proposed the Preferred Alternative as the Least Environmentally Damaging Practicable Alternative (LEDPA), as the impacts to jurisdictional areas least when compared to other alternatives and are unavoidable. It is important to note that this is a currently active farm and the wetlands in this area have been manipulated as a result of long standing farming activities and pond creation. A majority of the proposed impacts are to PEM wetlands and are within the footprint of previously drained ponds. The location of

impacts to jurisdictional waters of the U.S. identified within the Project limits are shown on the attached Waters of the U.S. Impacts Map (Figure 3: Jurisdictional Waters of the U.S. Impacts Map – Sheets 1 - 9). Therefore, to accomplish the goals of the Project, a total of area of 29,027 square feet (0.67 acre) of unavoidable permanent impacts to wetlands and 1,490 linear feet of impacts to an intermittent (R4) stream channel is required.

Review of Coastal Resources

As stipulated by VCP, Timmons Group has reviewed the following coastal resources for potential impact:

- **Tidal and Non-tidal Wetland Management** – The jurisdictional waters of the US, including both wetlands and streams, were confirmed by the United States Army Corps Engineers (COE) on July 19, 2016 (NAO-2016-1228). A map illustrating the jurisdictional waters of the US boundaries identified onsite are shown on the attached Preliminary Water of the U.S. Delineation Map. Wetlands identified onsite consisted of palustrine emergent (PEM) wetlands, palustrine forested (PFO) wetlands, palustrine scrub shrub (PSS) wetlands, isolated palustrine open water (POW), perennial streams, and intermittent streams. No tidal wetlands were identified onsite.

The development of the Project will require unavoidable permanent impacts to 29,027 square feet (0.67 acre) of unavoidable permanent impacts to wetlands and 1,490 linear feet of impacts to an intermittent (R4) stream channel is required. A map showing the location of the jurisdictional impacts is shown on the attached Figure 3: Jurisdictional Waters of the U.S. Impacts Map.

Detailed information concerning Curles Neck exploration on specific properties is proprietary and confidential business information. The proposed site is of sufficient size, possesses quality reserves of extractable mineral deposits, and has direct access to the James River and a local road network, without necessitating any further offsite road improvements. The amount of wetland and stream affected by the proposed project is small, in comparison to the alternate sites, and will be mitigated as outlined in other sections of this document. Conversely, the amount of land disturbance required to develop a similar project at a green field location would likely be orders of magnitude more due to the need for entirely new onsite and offsite infrastructure at a new and separate mine site, when compared to what is required to re-open an existing mine in the same manner.

Curles Neck Mine has implemented measures in the design of the mining activities to avoid and minimize extraction of mineral resources in wetlands and streams to the greatest extent practicable. High quality waters of the U.S. (e.g. James River), including emergent wetlands to the west of the pit will be avoided by the proposed mineral extraction process targeting resources in the central portion of the Site. The avoided areas include approximately 2,172 linear feet of the James River, 793 linear feet of intermittent stream, 2.05 acres of palustrine emergent (PEM) wetland, and a 10+ acre pond in the southeast corner of the property.

- The avoided upgradient section of stream that enters the northeastern end of the project area will feed into a man-made diversion channel and pipe conveyance system. This ditch/pipe system will direct base flow and storm flow to the west around the future pit area to an unnamed tributary to the James River.

- Due to the central location of the wetlands and Waters within the project area, mining activities within this tributary and its headwater wetlands will require mitigation. The following table provides a summary of the effected waters of the U.S:

Impact Site	Wetland/Water Impact Description*	Wetland Impact Area		Stream Impact Area			Apprx. Vol. of Fill below OHW	Cowardin Classification of Impacted Wetland/Water	Average Stream Flow	Drainage Area	DEQ Classification of Impacted Resource
(1,2, etc.)		s.f.	a.c.	L	W	s.f.	c.y.	(PEM, PSS, etc.)	c.f.s.	sq. mile	
1	EX,NT,PE,V	1,060	0.024					PEM	n/a	n/a	VII
2	EX,NT,PE,V	5,536	0.127					PEM	n/a	n/a	VII
3	EX,NT,PE, IN			138	2	276		R4	<5	<5	III
4	EX,NT,PE,V	13,266	0.305					PEM	n/a	n/a	VII
5	EX,NT,PE,V	588	0.013					PFO	n/a	n/a	VII
6	EX,NT,PE,V	764	0.018					PEM	n/a	n/a	VII
7	EX,NT,PE,V	6,079	0.140					PSS	n/a	n/a	VII
8	EX,NT,PE,V	1,734	0.040					PFO	n/a	n/a	VII
9	EX, NT,PE, IN			1352	8	10816		R4	<5	<5	III
Total		29,027	0.67	1490		11092	0.00				

* Use all that apply: F-fill, EX-excavation, S-Structure, T-tidal, NT-non-tidal, TE-temporary, PE-permanent, PR-perennial, IN-intermittent, EP-ephemeral, SB-subaqueous bottom, DB-Dune/Beach, IS-hydrologically isolated, V-vegetated, NV-non-vegetated, MC-mechanized clearing of PFO

Curles Neck proposes to provide compensation for unavoidable impacts through the purchase of off-site mitigation credits from a Wetland and Stream Mitigation Bank, which is approved for use in the Lower James Watershed (Hydrologic Unit Code 02080206). Wetland mitigation credits will be purchased using the Standard Compensatory Mitigation Ratios at ratios of 1:1 (0.474 credits) for PEM wetland impacts, 1.5:1 for PSS wetlands (0.21 credits), and 2:1 for PFO wetlands (0.106 credits). This equates to a total wetland compensatory mitigation obligation of 0.79 wetland credits. Stream credits will be purchased based on application of the Unified Stream Methodology (USM) Stream Assessment, where the compensation requirement was determined to be 1,361. The purchase of stream and wetland credits will ensure there will be no net loss of aquatic resource function and value as a result of the proposed project, while also ensuring the protection of avoided onsite resources with the additional benefit of protecting downstream water quality.

- Fisheries Management** – The project area is within a private property owned by the applicant and therefore does not support an active commercial fishing industry or public recreational fishing activities. Stormwater management on-site will protect downstream fisheries from degradation. Groundwater and stormwater will be monitored in accordance with the mines DMME permit administered by the Virginia Department of Mineral Mining and Energy. Therefore, the project should have no affect for shellfish and other aquatic species.
- Subaqueous Lands Management** – Although the property is bounded by the James River, no subaqueous land is located within the Project limits. The development of the Project will not result in the destruction of subaqueous lands.

- **Dunes Management** – Based on the inspection of the attached USGS Vicinity Map and past site inspections, there are no sand dunes located on or near the Project. Development of the Project will not result in the destruction or alteration of any sand dunes.
- **Point Source Air Pollution** – The proposed mine should not have any impact on the air quality and open burning will not be necessary for the proposed project. Even though air quality should not be compromised by the proposed project, all activities will be conducted in accordance with regulations for ambient air standards (9VAC 5-30), hazardous air pollution sources (9VAC 5-60), abatement of visible and fugitive dust emissions (9VAC 5-50-60) and open burning (9VAC 5-130 & 9VAC 5-40-5600). During the quarry operations, fugitive dust will be kept to a minimum with the implementation of typical dust suppression techniques. Therefore, no adverse impact is anticipated.
- **Point Source Water Pollution** – All stormwater runoff will be treated prior to discharge off-site in accordance with an approved Stormwater Management Plan and Virginia Pollution Discharge Elimination System permit (if required). The proposed project will improve water quality and reduce both non-point and point source pollution by treating and monitoring stormwater and groundwater on-site in accordance with the VDMME permit administered by the Virginia Department of Mineral Mining and Energy.
- **Non-point Source Water Pollution** – The proposed project is required to include an Erosion and Sediment Control (E&S) Plan that meets the latest State regulations and adheres to the methodology prescribed in the *Virginia Erosion and Sediment Control Handbook* (Third Edition, 1992) published by the Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation. Stormwater management on-site will protect downstream fisheries from degradation. Groundwater and stormwater will be monitored in accordance with the quarries DMME permit administered by the Virginia Department of Mineral Mining and Energy. Therefore, the project should have no affect for shellfish and other aquatic species.
- **Shoreline Sanitation** – No septic systems or drainfields are proposed for the Project; therefore, the development of the Project will not result in a potential risk to shoreline sanitation.
- **Coastal Lands Management** – The Virginia Department of Environmental Quality (VDEQ) administers the Virginia Coastal Zone Management Program, commonly referred to as the Virginia Coastal Program (VCP), to protect and manage Virginia's coastal zone from the shoreline to as far as 100 miles inland on the four tidal rivers of Virginia (the Potomac, Rappahannock, James, and York Rivers). Henrico County is a member of Virginia's coastal community due to its location within the Coastal Zone Management Area. The proposed project will be constructed in accordance with the Chesapeake Bay Preservation Act (CBPA) and Henrico County Ordinance. All Resource Protection Areas will be identified on construction plans. Therefore, no adverse impacts are anticipated. Therefore, proposed projects located in the County are required to be consistent with the VCP.

The proposed project will be constructed in accordance with the Chesapeake Bay Preservation Act (CBPA) and Henrico County Ordinance. Resource scientists have

assessed the stream reaches that are located within the project area. These streams are depicted on the attached figures. The only stream subject to the RPA is James River. Henrico County has confirmed the resource determinations. Prior to any land disturbance activities within the project area, Curles Neck will submit construction plans that depict Henrico County's final decision regarding RPA boundaries to the County and VDCR for approval. Therefore, we anticipate no adverse impacts to the RPA.

- **T&E Species** – An Endangered Species Project Review was conducted to gain insight regarding the potential presence of Endangered Species Act (ESA) listed species within or in the vicinity of the Project.

Based on the results of the IPaC review, the following species have the potential to be present within the project area:

- Sensitive joint-vetch (*Aeschynomene virginica*)
- Northern Long Eared Bat (*Myotis septentrionalis*)

Sensitive joint-vetch is most commonly found in the intertidal zone of coastal marshes, where plants are subject to tidal flooding twice each day. There are no tidal marshes within the subject property, nor is any work proposed along the James River. Because the site lacks suitable habitat, we do not believe that the proposed project will negatively affect populations of sensitive joint-vetch.

Based upon a review of available information, in particular the VDGIF NLEB Winter Habitat and Roost Tree Locator, there are no known maternity roosts or hibernacula located within or in close proximity to the Project. Therefore, the Project will not affect any known NLEB occupied areas. The Project will result in approximately 12 acres of forest conversion for lot development and infrastructure construction.

The Applicant be will relying upon the findings of the January 5, 2016 Programmatic Biological Opinion for the Final 4(d) Rule on the Northern Long-Eared Bat and Activities Excepted from Take Prohibitions to fulfill the project-specific Section 7 responsibilities. The Applicant will not implement voluntary conservation measures.

The Project Area is not within 660 feet of a bald eagle nest however; the site does intersect with an eagle concentration area along the western property line. Based on the limits of disturbance, we do not believe that there will be an adverse effect on the Bald Eagle.

There is no Critical Habitat identified on the Property.

By this certification that the Project is consistent with the Virginia Coastal Zone Management Program, Virginia is notified that it has six months from the receipt of this letter and accompanying information in which to concur with or object to Curles Neck Properties, LLC certification. Pursuant to 15 CFR Section 930.63(b), if Virginia has not issued a decision within three months following commencement of State agency review, it shall notify Curles Neck Properties, LLC, and the federal agency of the status of the matter and the basis for further delay.

The State's concurrence, objection, or notification of review status shall be sent to:

Curles Neck Properties, L.L.C.
ATTN: Mr. Jerry Cable
701 East Byrd Street
Richmond, Virginia 23219

with a copy sent to:

Todd Preuninger
Timmons Group
1001 Boulders Parkway, Suite 300
Richmond, VA 23325

If you should have any questions, comments, or require additional information, please contact Todd Preuninger at (804) 200-6399 or John Brooks at (804) 200-6458. Thank you for your attention to this project.

Sincerely,

TIMMONS GROUP



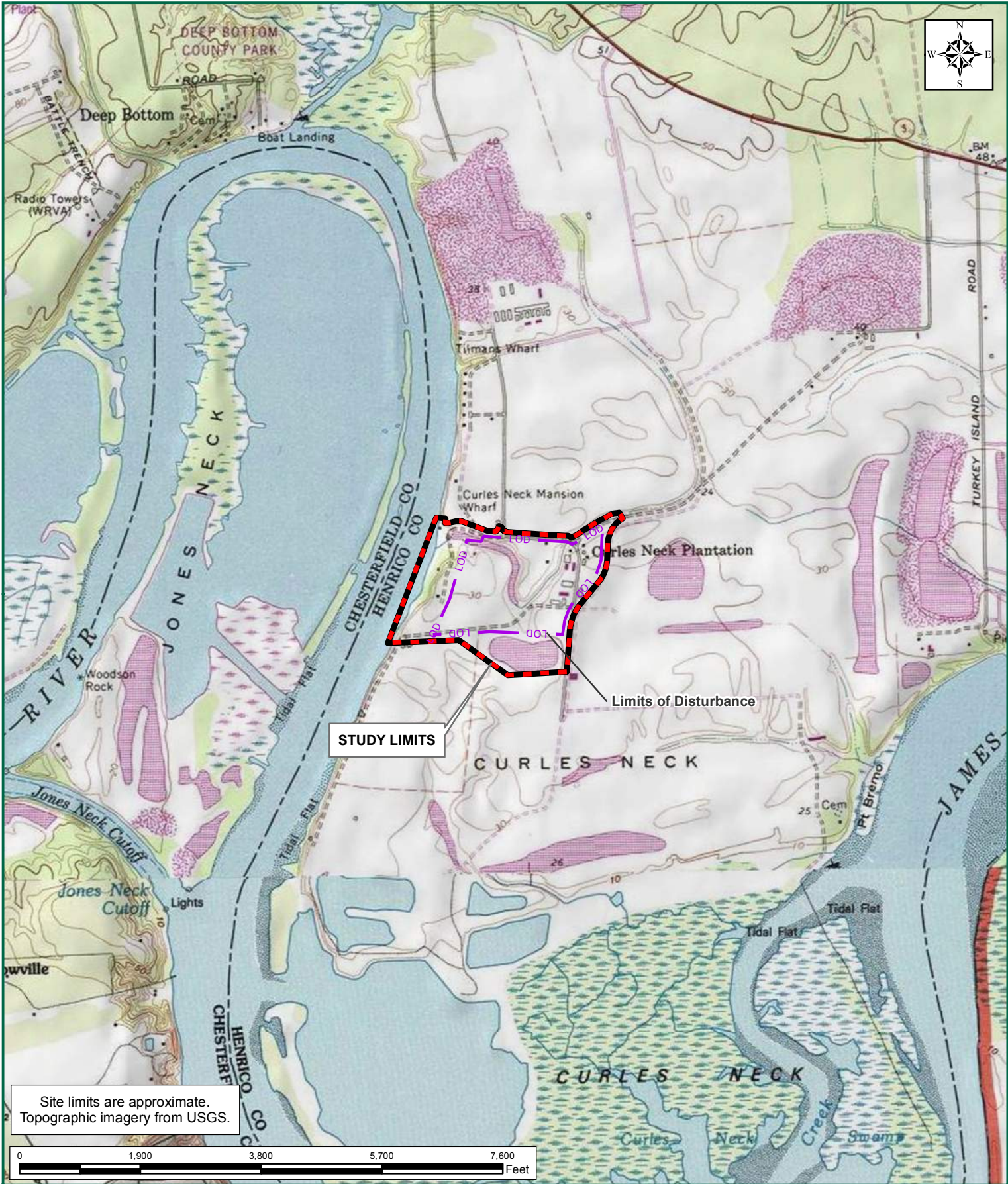
Todd Preuninger
Senior Environmental Scientist



John Brooks
Sr. Environmental Project Manager

Attachments

- 1) Site Location and Topography Map
- 2) Existing Conditions Map
- 3) Survey Limits of Waters of the U.S. Map
- 4) Jurisdictional Waters of the U.S. Impacts Map
- 5) FEMA Map
- 6) Supporting documents for Threatened and Endangered Species database review



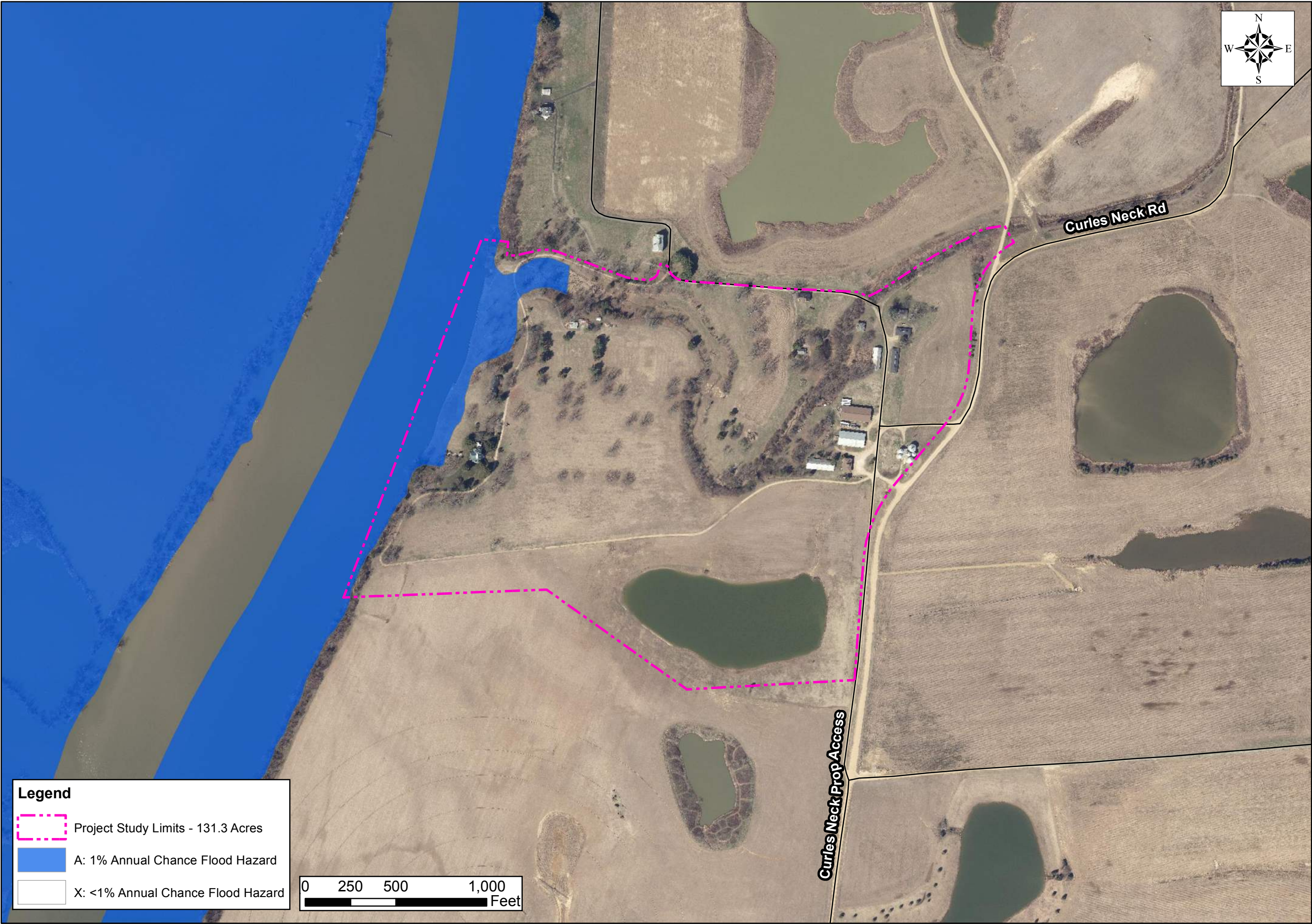
CURLES NECK FARM
HENRICO COUNTY, VIRGINIA
FIGURE 1: VICINITY MAP

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

TIMMONS GROUP JOB NUMBER: 38268
PROJECT STUDY LIMITS: 131.3 ACRES
LATITUDE: 37°23'12.35"N
LONGITUDE: 77°17'34.20"W

U.S.G.S. QUADRANGLE(S): DUTCH GAP
DATE(S): 1994
WATERSHED(S): LOWER JAMES
HYDROLOGIC UNIT CODE(S): 02080206

Path: Y:\804\38268-CurlesNeckFarm\GIS\Common Shared Exhibits\FEMA.mxd



Legend

Project Study Limits - 131.3 Acres

A: 1% Annual Chance Flood Hazard

X: <1% Annual Chance Flood Hazard

TIMMONS GROUP

CURLES NECK FARM

HENRICO COUNTY, VIRGINIA

FIGURE 2: FEMA FLOOD ZONE MAP

JOB NUMBER

38268

SHEET NO.

1 OF 1

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CORPORATE OFFICE

1001 Boulders Parkway, Suite 300 | Richmond, VA 23225

TEL 804.200.6500 FAX 804.560.7648 www.timmons.com

REVISION DESCRIPTION

DATE	
07/18/2016	DRAWN BY L. MAJOR
	DESIGNED BY L. MAJOR
	CHECKED BY J. BROOKS
	SCALE 1" = 500'

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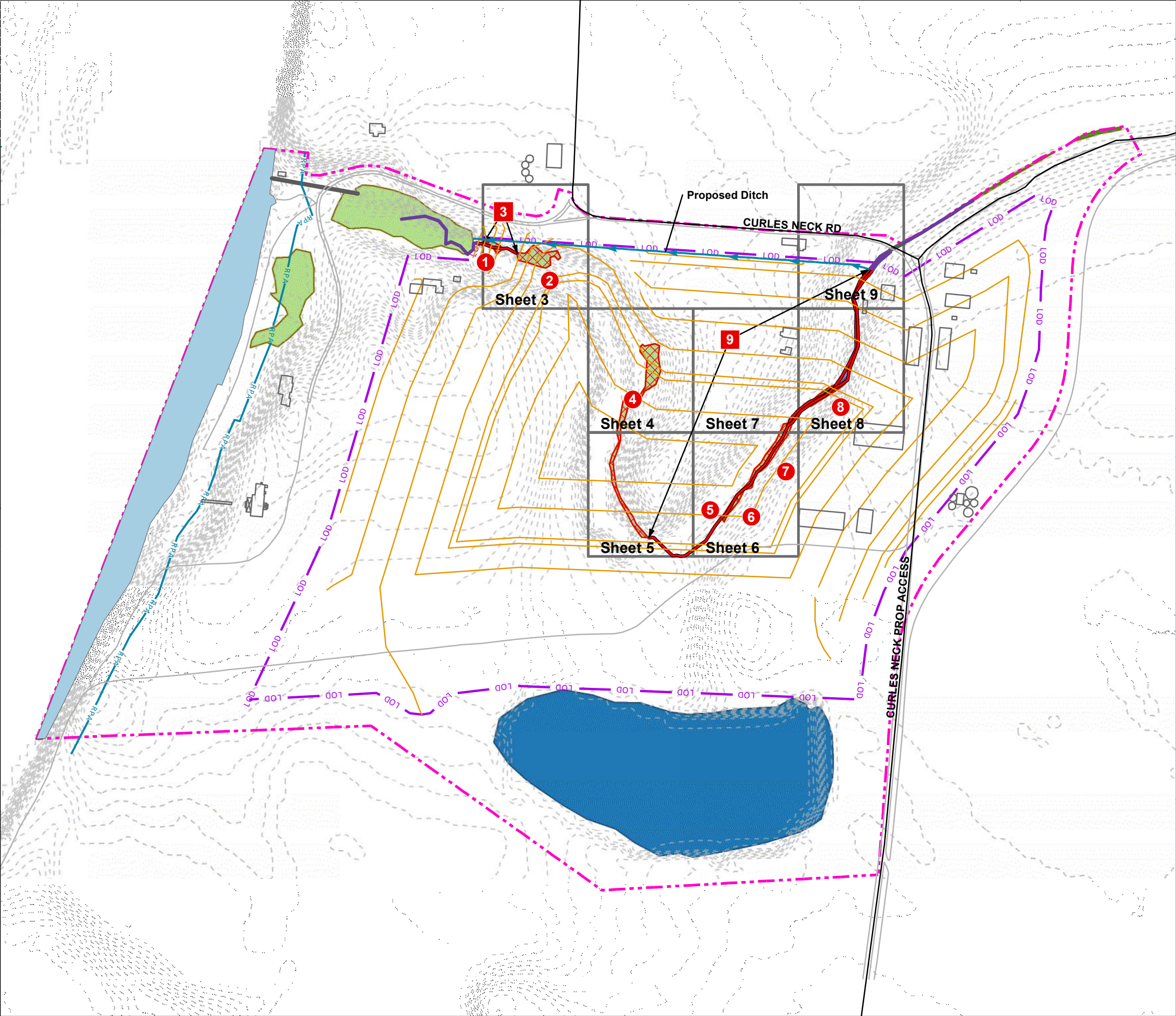
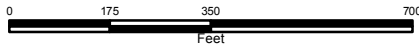
Impacts Table						
Impact ID	Wetland (sq. ft)				Stream (lf)	
	Impact		Conversion		Impact	
	Temporary	Permanent	Temporary	Permanent	Temporary	Permanent
1		1,060				
2		5,536				
3						138
4		13,266				
5		588				
6		764				
7		6,079				
8		1,734				
9						1,352
Total	0 sq ft 0.00 ac	29,027 sq ft 0.67 ac	0 sq ft 0.00 ac	0 sq ft 0.00 ac	0 lf	1,490 lf

Legend

- Project Study Limits - 132.7 Acres
- Limits of Disturbance - 71.1 Acres
- Sheet Index
- Stream Impact
- Wetland Impact
- Proposed Ditch
- Proposed Grading
- 1' Topographic Contours
- Permanent Stream Impact
- Culvert
- Intermittent Stream (R4)
- Perennial Stream (R3) - Top of Bank
- Permanent Wetland Impact
- Intermittent Stream - Top of Bank
- Palustrine Emergent (PEM) Wetland
- Palustrine Forested (PFO) Wetland
- Palustrine Open Water (POW)
- Palustrine Scrub-Shrub (PSS) Wetland

NOTES:

- WATERS OF THE U.S. WITHIN THE PROJECT STUDY LIMITS HAVE BEEN GPS LOCATED BY TIMMONS GROUP.
- WATERS OF THE U.S. HAVE BEEN CONFIRMED BY THE U.S. ARMY CORPS OF ENGINEERS.
- PROJECT STUDY LIMITS ARE APPROXIMATE.
- TOPOGRAPHY BASED ON USGS LIDAR DATA.
- COWARDIN STREAM CLASSIFICATIONS ARE BASED SOLELY ON FIELD OBSERVATIONS. NO FORMAL STREAM ASSESSMENT METHODOLOGY WAS COMPLETED TO DETERMINE THESE COWARDIN CLASSIFICATIONS.



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Environmental

REVISION DESCRIPTION

DATE

07/26/2016

DRAWN BY
B. NORRIS

DESIGNED BY
B. NORRIS

CHECKED BY
J. BROOKS

SCALE
1" = 350'

TIMMONS GROUP

CURLES NECK FARM

HENRICO COUNTY, VIRGINIA

FIGURE 3: PRELIMINARY JURISDICTIONAL WATERS OF THE U.S. IMPACTS MAP

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1 OF 9

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Resource Identification	Classification							Resource Description Notes*
	PFO (sq ft)	PSS (sq ft)	PEM (sq ft)	POW (sq ft)	R3 (lf)	R4 (lf)	R6 (lf)	
A					2,172			NT/NV
B			32,407					NT/V
C			57,143					NT/V
D						505		NT/NV
E			1,060					NT/V
F			5,536					NT/V
G			13,265					NT/V
H						1,778		NT/NV
I	588	6,080	764					NT/V
J	1,734							NT/V
K	1,857							NT/V
L	1,627							NT/V
Total	5,806	6,080	110,173	0	2,172	2,283	0	
Total Wetland Area =				122,059 sq ft	2.80 ac			
Total Stream Length =				4,455 lf				

Legend

Tidal; NT=Non-tidal; V=Vegetated; NV=Non-Vegetated; PFO=Palustrine Forested Wetland; PSS=Palustrine Scrub-Shrub Wetland; PEM=Palustrine Emergent Wetland; POW=Palustrine Open Water; E=Estuarine; R3=Upper Perennial Streams; R4=Intermittent Streams; R6=Emergent Streams; JD= Jurisdictional Ditch

Project Study Limits 191.3 Acres

Wetland Flag

- Field Data Station
- Culvert
- Perennial Stream (R3)
- Intermittent Stream (R4)
- Palustrine Emergent (PEM) Wetlands
- Palustrine Forested (PFO) Wetlands
- Palustrine Scrub-Shrub (PSS) Wetlands
- Upland Pond (10.46 Acres)

2 Foot Contours

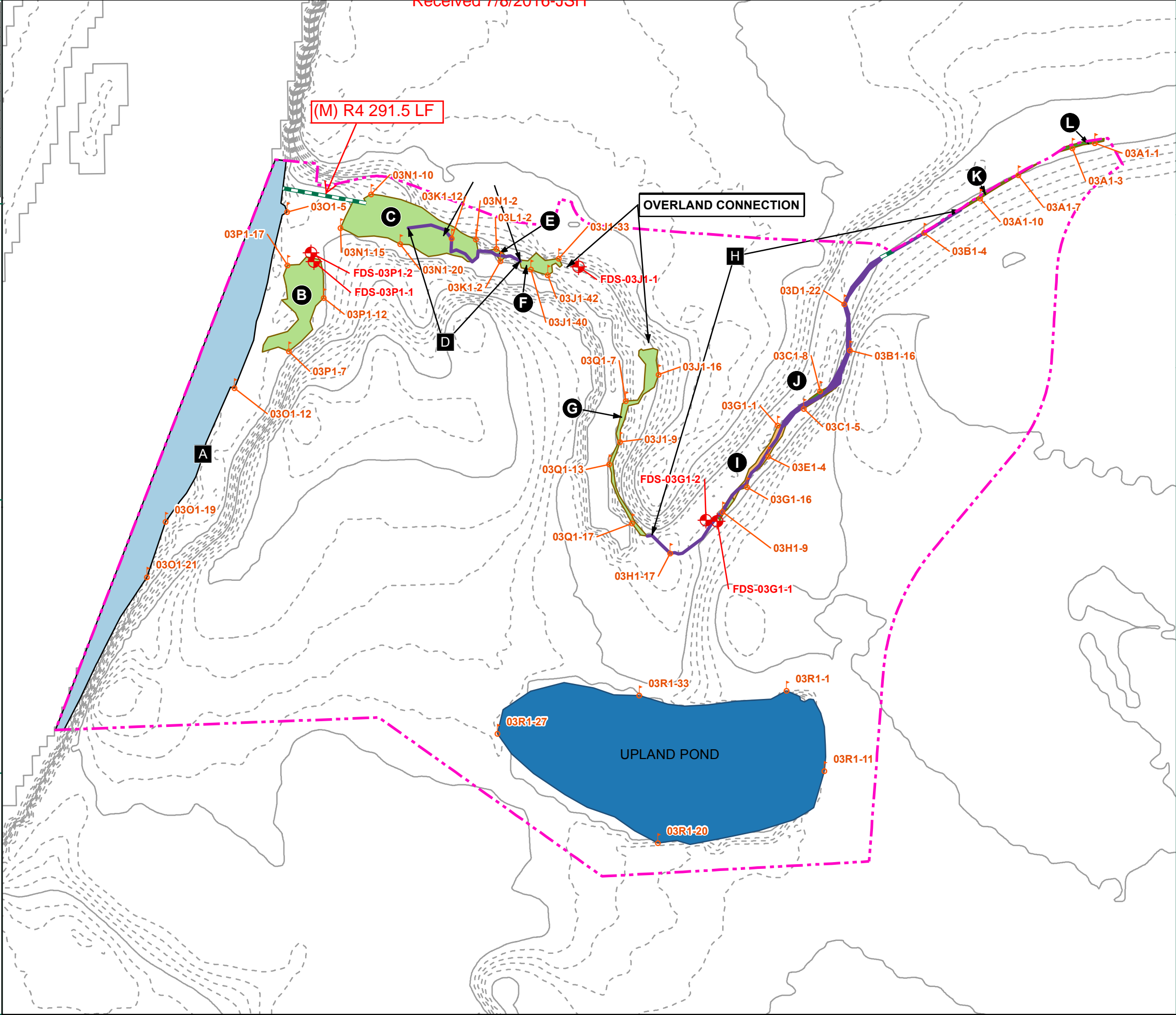
- 10 ft.
- 2 ft.

NOTES:

1. WATERS OF THE U.S. WITHIN THE PROJECT STUDY LIMITS HAVE BEEN GPS LOCATED BY TIMMONS GROUP.
2. WATERS OF THE U.S. HAVE NOT BEEN CONFIRMED BY THE U.S. ARMY CORPS OF ENGINEERS.
3. PROJECT STUDY LIMITS ARE APPROXIMATE.
4. TOPOGRAPHY BASED ON USGS LIDAR DATA.
5. COWARDIN STREAM CLASSIFICATIONS ARE BASED SOLELY ON FIELD OBSERVATIONS. NO FORMAL STREAM ASSESSMENT METHODOLOGY WAS COMPLETED TO DETERMINE THESE COWARDIN CLASSIFICATIONS.

North Arrow

Scale: 0 175 350 700 Feet



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DATE
07/18/16

DATE
05/13/16

DRAWN BY
C. CHAPPELL

DESIGNED BY
C. CHAPPELL

CHECKED BY
D. COX

SCALE
1" = 350'

REVISION DESCRIPTION

TIMMONS GROUP

CURLES NECK FARM
HENRICO COUNTY, VIRGINIA

FIGURE 4: PRELIMINARY JURISDICTIONAL WATERS OF THE U.S. DELINEATION MAP

JOB NUMBER
38268

SHEET NO.
1 OF 1



COMMONWEALTH OF VIRGINIA
COUNTY OF HENRICO

STEVEN J. YOB, P.E.
DIRECTOR OF PUBLIC WORKS
COUNTY ENGINEER
(804) 501-4393

August 4, 2016

Mr. Daniel Cox
Environmental Scientist II
Timmons Group
1001 Boulders Parkway, Suite 300
Richmond, Virginia 23225

**Re: Perennial Stream Assessment
Curles Neck Farm**

Dear Mr. Cox:

In response to your request, I have reviewed the Field Data form and Perennial Stream Assessment Map you submitted for this project and performed an onsite visit. I agree with your findings that this reach of stream channel is intermittent. If the drainage area for this channel is greater than 100-acres a 50-foot SPA buffer will be required. If you have any questions regarding these findings, please call me at 727-8325.

Sincerely,

Robin V. Wilder
Water Quality Research Analyst

Resource Identification	Classification								Resource Description Notes*
	PFO (sq ft)	PSS (sq ft)	PEM (sq ft)	POW (sq ft)	R3 (ft)	R4 (ft)	R6 (ft)	JD (ft)	
A					2,172				NT/NV
B			32,407						NT/V
C			57,143						NT/V
D						505			NT/NV
E			1,060						NT/V
F			5,536						NT/V
G			13,265						NT/V
H						1,778			NT/NV
I	588	6,080	764						NT/V
J	1,734								NT/V
K	1,857								NT/V
L	1,627								NT/V
M				455,771					NT/V
Total	5,806	6,080	110,173	455,771	2,172	2,283	0	0	
Total Wetland Area =				577,829 sq ft	13.27 ac				
Total Stream Length =				4,455 lf					
* T=Tidal; NT=Non-tidal; V=Vegetated; NV=Non-Vegetated; PFO=Palustrine Forested Wetland; PSS=Palustrine Scrub-Shrub Wetland; PEM=Palustrine Emergent Wetland; POW= Palustrine Open Water; EIW= Estuarine Inter tidal Wetlands; R3= Upper Perennial Streams; R4=Intermittent Streams; R6 = Ephemeral Streams; JD= Jurisdictional Ditch									

Legend

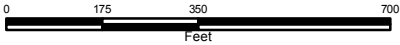
- Project Study Limits - 131.3 Acres
- Resource Protection Area
- Culvert
- Perennial Stream (R3)
- Intermittent Stream (R4)
- Palustrine Emergent (PEM) Wetlands
- Palustrine Forested (PFO) Wetlands
- Palustrine Scrub-Shrub (PSS) Wetlands
- Palustrine Open Water (POW)

2 Foot Contours

- 10 ft.
- 2 ft.

NOTES:

1. WATERS OF THE U.S. WITHIN THE PROJECT STUDY LIMITS HAVE BEEN GPS LOCATED BY TIMMONS GROUP.
2. WATERS OF THE U.S. HAVE NOT BEEN CONFIRMED BY THE U.S. ARMY CORPS OF ENGINEERS.
3. PROJECT STUDY LIMITS ARE APPROXIMATE.
4. TOPOGRAPHY BASED ON USGS LIDAR DATA.



THIS DRAWING PREPARED AT THE
CORPORATE OFFICE
1001 Boulders Parkway, Suite 300 | Richmond, VA 23225
TEL 804.200.6500 FAX 804.560.7648 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS

Site Development | Residential | Infrastructure | Technology | Environmental

REVISION DESCRIPTION

DATE	
05/13/16	
DRAWN BY	D. COX
DESIGNED BY	D. COX
CHECKED BY	J. BROOKS
SCALE	1" = 350'

TIMMONS GROUP

CURLES NECK FARM
HENRICO COUNTY, VIRGINIA

FIGURE 2: PERENNIAL STREAM ASSESSMENT MAP

JOB NUMBER
38268

SHEET NO.
1 OF 1

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DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

July 19, 2016

PRELIMINARY JURISDICTIONAL DETERMINATION

Southern Virginia Regulatory Section
NAO-2016-1228 (James River)

Mr. Jerry Cable
1201 E. Cary Street
Richmond, Virginia 23233

Dear Mr. Cable:

This letter is in regard to your request for a preliminary jurisdictional determination for waters of the U.S. (including wetlands) on property known as Curles Neck Farm, located on a 131.3 acre parcel off SR 5 and Curles Neck Farm Drive, in Henrico County, Virginia.

The map entitled "Curles Neck Farm", by Timmons Group dated July 8, 2016 and Corps date stamped as received July 8, 2016 (copy enclosed) provides the location(s) of waters and/or wetlands on the property listed above. The basis for this delineation includes application of the Corps' 1987 Wetland Delineation Manual and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region and the positive indicators of wetland hydrology, hydric soils, and hydrophytic vegetation and the presence of an ordinary high water mark.

Discharges of dredged or fill material, including those associated with mechanized landclearing, into waters and/or wetlands on this site may require a Department of the Army permit and authorization by state and local authorities including a Virginia Water Protection Permit from the Virginia Department of Environmental Quality (DEQ), a permit from the Virginia Marine Resources Commission (VMRC) and/or a permit from your local wetlands board. This letter is a confirmation of the Corps preliminary jurisdiction for the waters and/or wetlands on the subject property and does not authorize any work in these areas. Please obtain all required permits before starting work in the delineated waters/wetland areas.

This is a preliminary jurisdictional determination and is therefore not a legally binding determination regarding whether Corps jurisdiction applies to the waters or wetlands in question. Accordingly, you may either consent to jurisdiction as set out in this preliminary jurisdictional determination and the attachments hereto if you agree with the determination, or you may request and obtain an approved jurisdictional determination.

Enclosed is a copy of the "Preliminary Jurisdictional Determination Form". Please review the document, sign, and return one copy to Ms. Julie S. Hamilton, either via

email (julie.s.hamilton@usace.army.mil) or via standard mail to US Army Corps of Engineers, Regulatory Office, and ATTN: Julie Hamilton, 9100 Arboretum Parkway, Suite 235, Richmond, Virginia, 23236 within 30 days of receipt and keep one for your records. This delineation of waters and/or wetlands is valid for a period of five years from the date of this letter unless new information warrants revision prior to the expiration date.

Copies of this letter have been provided to the Virginia Department of Environmental Quality, Henrico County Department of Public Works and Timmons Group. If you have any questions, please contact the office either via telephone at (804) 323-3783 or via email at julie.s.hamilton@usace.army.mil

Sincerely,

Julie S. Hamilton
Environmental Scientist
Southern Virginia Regulatory Section

Enclosure(s)

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION:

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): Tuesday, July 19, 2016

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
Mr. Dan Cox
Timmons Group

C. DISTRICT OFFICE: Norfolk District (CENAO-REG)

FILE NAME: Curles Neck Farm-Jerry Cable

FILE NUMBER: NAO-2016-1228

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: **VIRGINIA** County/parish/borough: Henrico City:

Center coordinates of site (lat/long in degree decimal format):

Latitude: 37.3879 ° N Longitude: -77.2921 ° W

Universal Transverse Mercator:

Name of nearest waterbody: James River

Identify (estimate) amount of waters in the review area:

Non-wetland waters: linear feet; width (ft); and/or acres.

Cowardin Class:

Stream Flow:

Wetlands: acres

Cowardin Class:

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal:

Non-Tidal:

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☒ Field Determination. Date(s): July 6, 2016

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.
2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.
3. This preliminary JD finds that there "*may be*" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA:

Data reviewed for preliminary JD (check all that apply) - checked items should be included in case file and, where checked and requested, appropriately reference sources below.

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:

- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- ☒ Office concurs with data sheets/delineation report.
- ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps:
- ☐ Corps navigable waters' study:
- ☐ U.S. Geological Survey Hydrologic Atlas:
- ☐ USGS NHD data.
- ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name:
- ☒ USDA Natural Resources Conservation Service Soil Survey.
- Citation:
- ☐ National wetlands inventory map(s). Cite name:
- ☐ State/Local wetland inventory map(s):
- ☐ FEMA/FIRM maps:
- ☒ 100-year Floodplain Elevation: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date):
- or ☐ Other (Name & Date):
- ☐ Previous determination(s):
- File no. and date of response letter:
- ☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature
Regulatory Project Manager
(REQUIRED)

2016-07-19

Date

Signature of person requesting
Preliminary JD
(REQUIRED, unless obtaining the signature is impracticable)

Date



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

July 19, 2016

Supplemental Preapplication Information

Project Number: NAO-2016-1228

Applicant: Mr. Jerry Cable

Project Location: Curles Neck Farm and James River, Henrico County, Virginia

1. A search of the Virginia Department of Historic Resources data revealed the following:

- ☐ No known historic properties are located on the property.
- ☒ The following known architectural resources are located on the property: 043-0035-Curles Neck Farm, 043-056-Bacon Farm Site, 043-5074-Deep Bottom Battlefield, 043-5050-Bailey's Creek Battlefield
- ☒ The following known archaeological resources are located on the property: 44HE0453, 44HE0635, 44HE0645, 44HE0634, 44HE0633, 44HE0632
- ☐ The following known historic resources are located in the vicinity of the property (potential for effects to these resources from future development):

NOTE:

- 1) *The information above is for planning purposes only. In most cases, the property has not been surveyed for historic resources. Undiscovered historic resources may be located on the subject property or adjacent properties and this supplemental information is not intended to satisfy the Corps' requirements under Section 106 of the National Historic Preservation Act (NHPA).*
- 2) *Prospective permittees should be aware that Section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant.*

2. A search of the data supplied by the U.S. Fish & Wildlife Service, the Virginia Department of Conservation and Recreation and the Virginia Department of Game and Inland Fisheries revealed the following:

- ☐ No known populations of threatened or endangered species are located on or within the vicinity of the subject property.
- ☒ The following federally-listed species may occur within the vicinity of the subject property: **Northern long-eared bat, Sensitive joint vetch**
- ☒ The following state-listed (or other) species may occur within the vicinity of the subject property: **Clemmys guttata, spotted turtle, Anadromous Fish Use Area**

Please note this information is being provided to you based on the preliminary data you submitted to the Corps relative to project boundaries and project plans. Consequently, these findings and recommendations are subject to change if the project scope changes or new information becomes available and the accuracy of the data.

*******Bald Eagle Concentration Area Summer and Winter*******



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Virginia Ecological Services Field Office

6669 SHORT LANE

GLOUCESTER, VA 23061

PHONE: (804)693-6694 FAX: (804)693-9032

URL: www.fws.gov/northeast/virginiafield/

Consultation Code: 05E2VA00-2016-SLI-3316

July 05, 2016

Event Code: 05E2VA00-2016-E-03928

Project Name: Curles Neck Farm

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and

endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: Curles Neck Farm

Official Species List

Provided by:

Virginia Ecological Services Field Office

6669 SHORT LANE

GLOUCESTER, VA 23061

(804) 693-6694

<http://www.fws.gov/northeast/virginiafield/>

Consultation Code: 05E2VA00-2016-SLI-3316

Event Code: 05E2VA00-2016-E-03928

Project Type: MINING

Project Name: Curles Neck Farm

Project Description: The proposed project is located in Henrico County, VA. The Site is bound by the James River to the west, Curles Neck Road to the north and east, and agricultural fields to the south. The project consist of sand and gravel extraction.

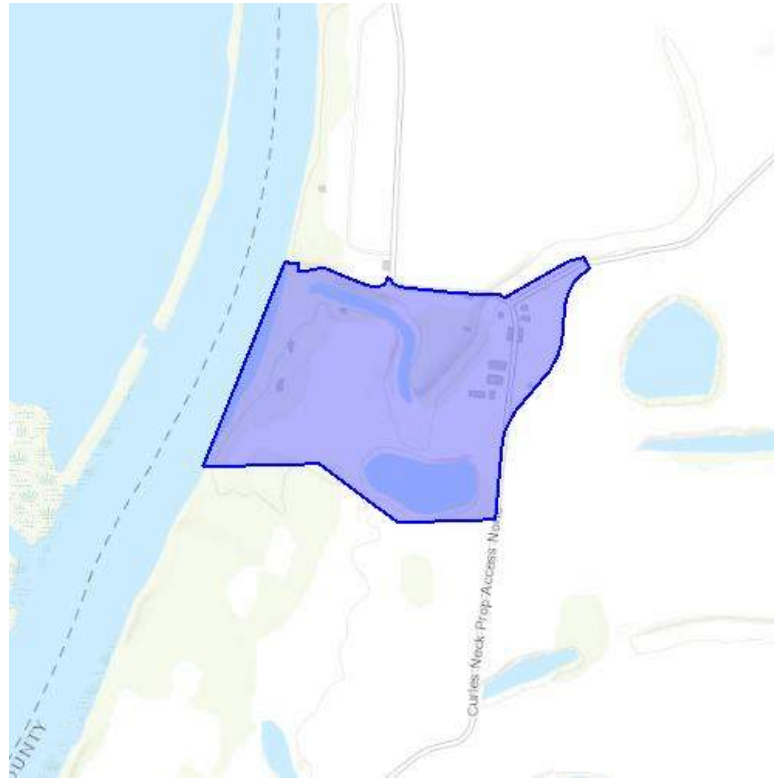
Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: Curles Neck Farm

Project Location Map:



Project Coordinates: The coordinates are too numerous to display here.

Project Counties: Henrico, VA



United States Department of Interior
Fish and Wildlife Service

Project name: Curles Neck Farm

Endangered Species Act Species List

There are a total of 2 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Flowering Plants	Status	Has Critical Habitat	Condition(s)
sensitive joint-vetch (<i>Aeschynomene virginica</i>)	Threatened		
Mammals			
Northern long-eared Bat (<i>Myotis septentrionalis</i>)	Threatened		



United States Department of Interior
Fish and Wildlife Service

Project name: Curles Neck Farm

Critical habitats that lie within your project area

There are no critical habitats within your project area.



United States Department of Interior
Fish and Wildlife Service

Project name: Curles Neck Farm

Appendix A: FWS National Wildlife Refuges and Fish Hatcheries

There are no refuges or fish hatcheries within your project area.

Natural Heritage Resources

Your Criteria

Watershed (8 digit HUC): 02080206 - Lower James River

Subwatershed (12 digit HUC): JL06 - James River-Curles Creek

Search Run: 7/5/2016 13:12:29 PM

Result Summary

Total Species returned: 5

Total Communities returned: 0

Click scientific names below to go to NatureServe report.

Click column headings for an explanation of species and community ranks.

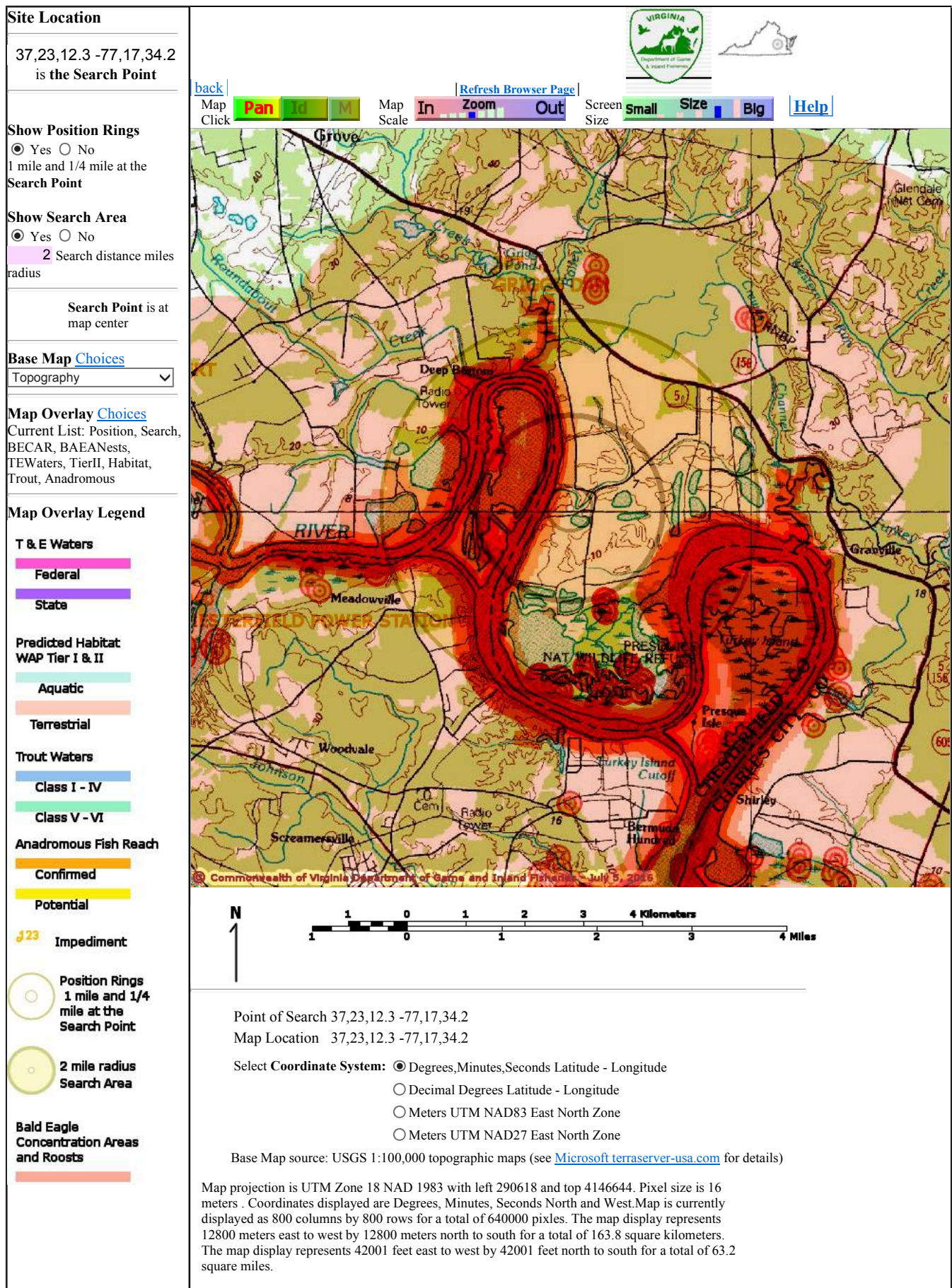
Common Name/Natural Community	Scientific Name	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
Lower James							
James River-Curles Creek							
BIRDS							
Northern Harrier	Circus cyaneus	G5	S1S2B,S3N	None	None	15	Y
Common Gallinule	Gallinula galeata	G5	S1B,S1N	None	None	2	Y

Common Name/Natural Community	Scientific Name	Global Conservation Status Rank	State Conservation Status Rank	Federal Legal Status	State Legal Status	Statewide Occurrences	Virginia Coastal Zone
CRUSTACEA (AMPHIPODS, ISOPODS & DECAPODS)							
Ohio River Shrimp	Macrobrachium ohioense	G4	S1	None	None	1	Y
FISH							
Atlantic Sturgeon	Acipenser oxyrinchus	G3	S2	LE	LE	2	Y
VASCULAR PLANTS							
Sensitive Joint-vetch	Aeschynomene virginica	G2	S2	LT	LT	22	Y

Note: On-line queries provide basic information from DCR's databases at the time of the request. They are NOT to be substituted for a project review or for on-site surveys required for environmental assessments of specific project areas.

For Additional Information on locations of Natural Heritage Resources please submit an [information request](#).

To Contribute information on locations of natural heritage resources, please fill out and submit a [rare species sighting form](#).



Topographic maps and Black and white aerial photography for year 1990+ are from the United States Department of the Interior, United States Geological Survey. Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.
Shaded topographic maps are from TOPO! ©2006 National Geographic
<http://www.national.geographic.com/topo>
All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2016-07-05 13:28:23 (qa/qc March 21, 2016 12:20 - tn=747842.0
dist=3218.688 I)
\$poi=37.3867500 -77.2928333

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VaFWIS Initial Project Assessment Report Compiled on 7/5/2016,[Help](#)

1:30:34 PM

Known or likely to occur within a **2 mile radius around point 37.3867500 -77.2928333**
in **041 Chesterfield County, 087 Henrico County, VA**

[View Map of
Site Location](#)

520 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 29) (29 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
060017	FESE	I	Spinymussel, James	Pleurobema collina		BOVA
010032	FESE	II	Sturgeon, Atlantic	Acipenser oxyrinchus		BOVA
060003	FESE	II	Wedgemussel, dwarf	Alasmidonta heterodon		BOVA
050022	FTST		Bat, northern long-eared	Myotis septentrionalis		BOVA
050020	SE		Bat, little brown	Myotis lucifugus lucifugus		BOVA
050027	SE		Bat, tri- colored	Perimyotis subflavus		BOVA
040096	ST	I	Falcon, peregrine	Falco peregrinus		BOVA
040293	ST	I	Shrike, loggerhead	Lanius ludovicianus		BOVA
020002	ST	II	Treefrog, barking	Hyla gratiosa		BOVA
060173	FSST	II	Pigtoe, Atlantic	Fusconaia masoni		BOVA
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans		BOVA
040093	FS	II	Eagle, bald	Haliaeetus leucocephalus	Yes	BOVA,BECAR,Habitat,BAEANests
060029	FS	III	Lance, yellow	Elliptio lanceolata		BOVA
010038	FS	IV	Herring, alewife	Alosa pseudoharengus	Yes	BOVA,SppObs
100001	FS	IV	fritillary, Diana	Speyeria diana		BOVA
010045	FS			Alosa aestivalis	Yes	BOVA,SppObs

			Herring, blueback			
030063	CC	III	Turtle, spotted	Clemmys guttata	Yes	BOVA,SppObs
010077		I	Shiner, bridle	Notropis bifrenatus		BOVA
040129		I	Sandpiper, upland	Bartramia longicauda		BOVA
040225		I	Sapsucker, yellow-bellied	Sphyrapicus varius		BOVA
040319		I	Warbler, black-throated green	Setophaga virens		BOVA
060084		I	Pigtoe, Virginia	Lexingtonia subplana		BOVA
040052		II	Duck, American black	Anas rubripes		BOVA
040029		II	Heron, little blue	Egretta caerulea caerulea		BOVA
040036		II	Night-heron, yellow-crowned	Nyctanassa violacea violacea		BOVA
040213		II	Owl, northern saw-whet	Aegolius acadicus		BOVA
040105		II	Rail, king	Rallus elegans		BOVA,Habitat
040320		II	Warbler, cerulean	Setophaga cerulea		BOVA
040266		II	Wren, winter	Troglodytes troglodytes		BOVA

To view **All 520 species** [View 520](#)

* FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FC=Federal Candidate; FS=Federal Species of Concern; CC=Collection Concern

** I=VA Wildlife Action Plan - Tier I - Critical Conservation Need;
 II=VA Wildlife Action Plan - Tier II - Very High Conservation Need;
 III=VA Wildlife Action Plan - Tier III - High Conservation Need;
 IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

[View Map of All Query Results from All Observation Tables](#)

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams (2 records)
[View Map of All
Anadromous Fish Use Streams](#)

Stream]

C24

C92

Impediments to Fish Passage

N/A

Colonial Water Bird Survey (1 records)
[View Map of All Query Results
Colonial Water Bird Survey](#)

Colony_Name	N Obs	Latest Date	N Species			View Map
			Different Species	Highest TE *	Highest Tier **	
Curles Neck Swamp	4	May 3 2003	2			Yes

Displayed 1 Colonial Water Bird Survey

Threatened and Endangered Waters

N/A

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roostsare present. [View Map of Bald Eagle Concentration Areas and Roosts](#)

(7 records)

BECAR ID	Observation Year	Authority	Type	Comments	View Map
7		Bryan Watts (Center for Conservation Biology)	Roost	Count 100	Yes
44	2009	Jeannette Parker (VDGIF)	Roost	Count 9	Yes
46	2009	Jeannette Parker (VDGIF)	Roost	Count 12	Yes
47	2006 - 2007	Center for Conservation Biology at the College of William and Mary/Virginia Commonwealth University	Summer Concentration Area	Eagle_use High	Yes
49	2006 - 2007	Center for Conservation Biology at the College of William and Mary/Virginia Commonwealth University	Summer Concentration Area	Eagle_use Moderate	Yes

50	2006 - 2007	Center for Conservation Biology at the College of William and Mary/Virginia Commonwealth University	Winter Concentration Area	Eagle_use High	Yes
52	2006 - 2007	Center for Conservation Biology at the College of William and Mary/Virginia Commonwealth University	Winter Concentration Area	Eagle_use Moderate	Yes

Bald Eagle Nests (13 records)
[View Map of All Query Results
Bald Eagle Nests](#)

Nest	N Obs	Latest Date	DGIF Nest Status	View Map
CD0402	15	Apr 18 2011	RECENTLY ACTIVE	Yes
CD0403	15	Apr 18 2011	RECENTLY ACTIVE	Yes
CD0701	2	Mar 2 2011	RECENTLY ACTIVE	Yes
CD9802	24	Apr 18 2011	RECENTLY ACTIVE	Yes
HE0301	16	Apr 18 2011	RECENTLY ACTIVE	Yes
HE0401	5	Apr 26 2006	HISTORIC	Yes
HE0601	13	Apr 18 2011	RECENTLY ACTIVE	Yes
HE0602	13	Apr 18 2011	RECENTLY ACTIVE	Yes
HE0603	7	Apr 23 2008	UNKNOWN	Yes
HE0604	13	Apr 18 2011	RECENTLY ACTIVE	Yes
HE0901	6	Apr 18 2011	RECENTLY ACTIVE	Yes
HE1001	4	Apr 18 2011	RECENTLY ACTIVE	Yes
HE9901	12	Apr 26 2006	HISTORIC	Yes

Displayed 13 Bald Eagle Nests

Habitat Predicted for Aquatic WAP Tier I & II Species

N/A

Habitat Predicted for Terrestrial WAP Tier I & II Species (2 Species)
[View Map of Combined Terrestrial Habitat Predicted for 2 WAP Tier I & II Species Listed Below](#)

ordered by Status Concern for Conservation

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
040093	FS	II	Eagle, bald	Haliaeetus leucocephalus	Yes
040105		II	Rail, king	Rallus elegans	Yes

Public Holdings: (1 names)

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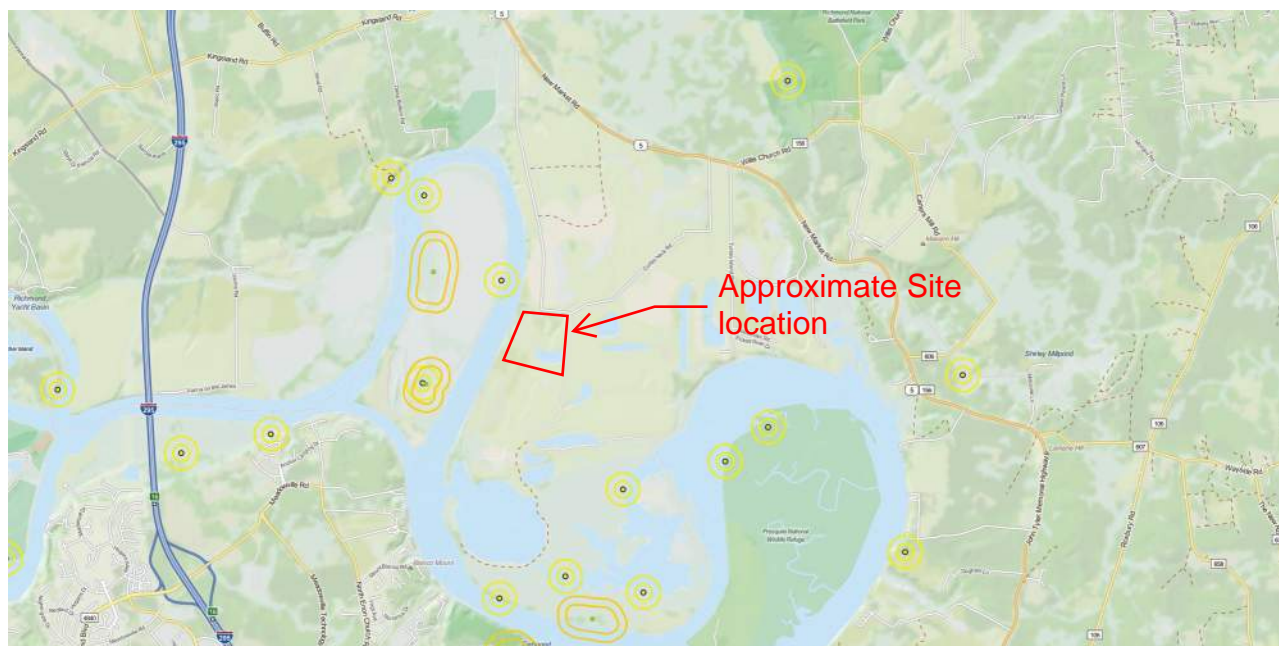
Name	Agency	Level
Presquile National Wildlife Refuge	U.S. Fish and Wildlife Service	Federal

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CCB Mapping Portal



Layers: Eagle Roost Polygons, VA Eagle Nest Locator, VA Eagle Nest Buffers, Eagle Roosts, Eagle Roost Buffers

Map Center [longitude, latitude]: [-77.2822093963623, 37.39102724317506]

Map Link:

http://www.ccbbirds.org/maps/#layer=Eagle+Roost+Polygons&layer=VA+Eagle+Nest+Locator&layer=VA+Eagle+Nest+Buffers&layer=Eagle+Roosts&layer=Eagle+Roost+Buffers&zoom=14&lat=37.39102724317506&lng=-77.2822093963623&legend=legend_tab_59557df6-c07b-11e5-a85-0e31c9be1b51&base=Street+Map+%28MapQuest%29

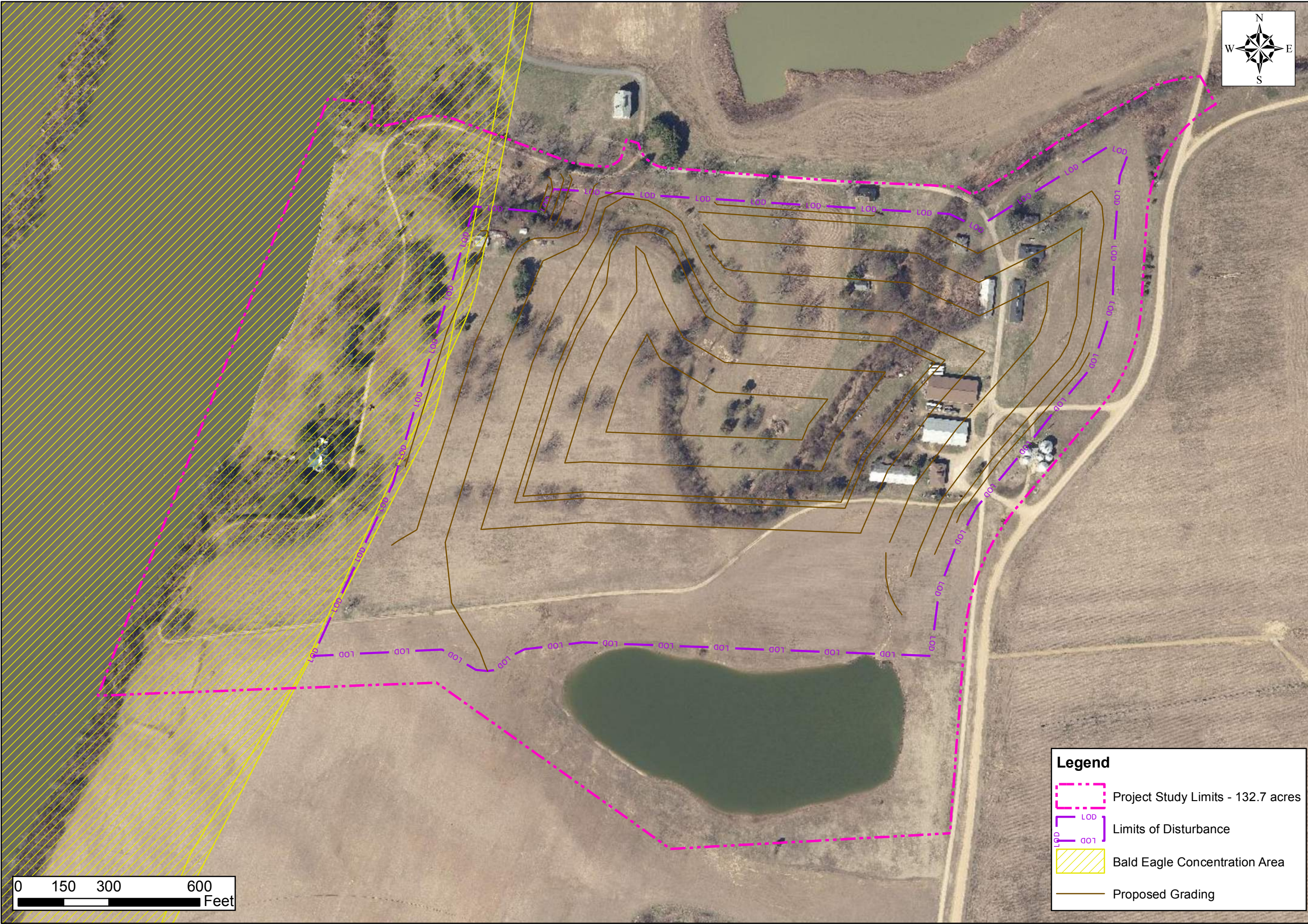
Report Generated On: 07/05/2016

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To learn more about CCB visit ccbbirds.org or contact us at info@ccbbirds.org

Path: Y:\804\38268-CurlesNeckFarm\GIS\Common Shared Exhibits\Bald Eagle Map.mxd



Legend

Project Study Limits - 132.7 acres

Limits of Disturbance

Bald Eagle Concentration Area

Proposed Grading

THIS DRAWING PREPARED AT THE
CORPORATE OFFICE
1001 Boulders Parkway, Suite 300 | Richmond, VA 23225
TEL 804.200.6500 FAX 804.560.7648 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS

Site Development

Residential

Infrastructure

Technology

Environmental

REVISION DESCRIPTION

DATE

08/04/2016

DRAWN BY
B. NORRIS

DESIGNED BY
B. NORRIS

CHECKED BY
T. PRUENINGER

SCALE
1" = 300'

CURLES NECK FARM

HENRICO COUNTY, VIRGINIA

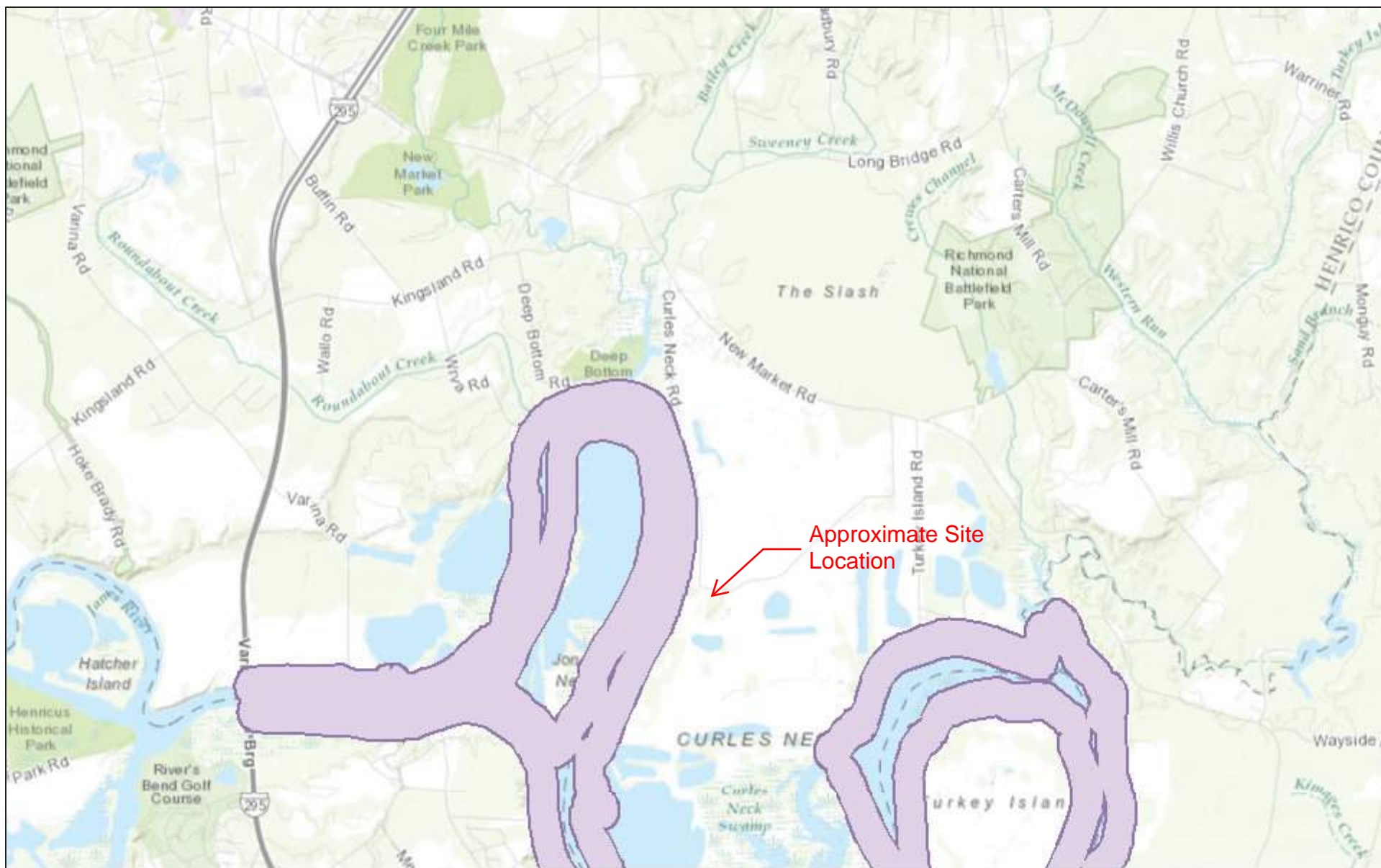
BALD EAGLE CONCENTRATION AREA MAP

JOB NUMBER
38268

SHEET NO.
1 OF 1

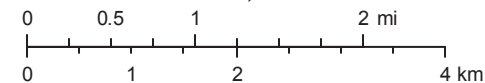
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Curles Neck - Eagle Concentration Area



July 5, 2016

1:72,224

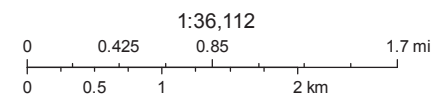


Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

Curles Neck_MYLU PESU Habitat 07052016

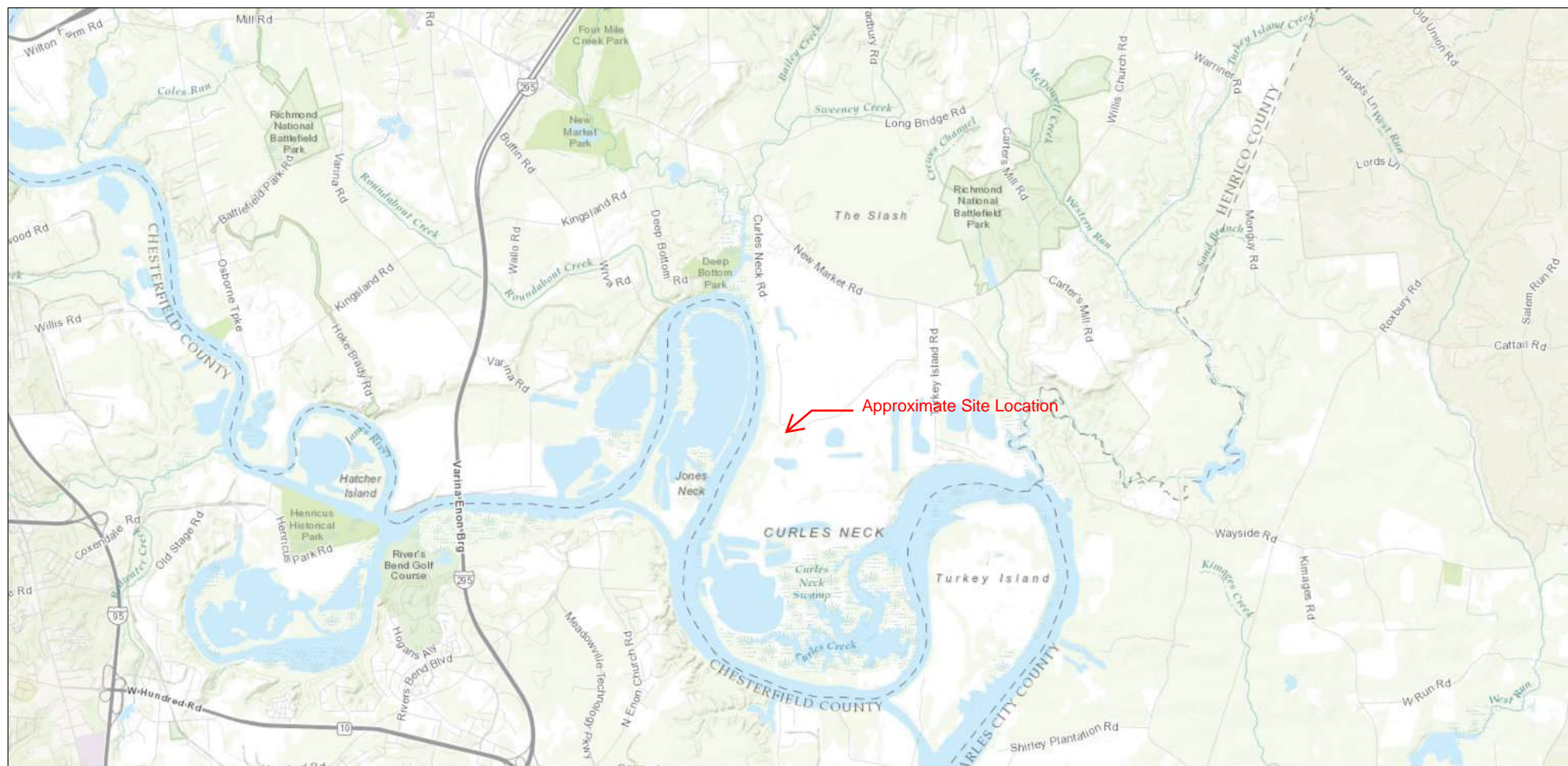


July 5, 2016



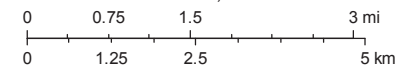
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

NLEB Locations and Roost Trees_07052016



July 5, 2016

1:72,224



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VA Dept. Game & Inland Fisheries
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